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In the Supreme Court of the United States

OCTOBER TERM, 1986

GRUMMAN AEROSPACE CORPORATION, PETITIONER

v.

EDWIN LEES SHAW, AS PERSONAL REPRESENTATIVE OF THE ESTATE OF GARY SCOTT SHAW, DECEASED

ON PETITION FOR A WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE ELEVENTH CIRCUIT

BRIEF FOR THE UNITED STATES AS AMICUS CURIAE

CHARLES FRIED
Solicitor General

RICHARD K. WILLARD
Assistant Attorney General

DONALD B. AYER
Deputy Solicitor General

JAMES M. SPEARS
ROBERT L. WILLMORE
Deputy Assistant Attorney General

CHRISTOPHER J. WRIGHT
Assistant to the Solicitor General

ROBERT S. GREENSPAN
Attorney
Department of Justice
Washington, D.C. 20530
(202) 633-2217

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This brief is submitted in response to the Court's invitation to the Solicitor General to express the views of the United States.

STATEMENT

1. Introduction

This case arises from the crash of a Navy jet aircraft in the Pacific Ocean seconds after its take-off from an aircraft carrier. The aircraft was an A-6—an all-weather, carrier-based, attack airplane that has been, since its deployment in the 1960s, "the mainstay of the carrier-based Naval air attack fleet" (Pet. App. 1-2). The pilot of the aircraft, Navy Lt. J.G. Gary S. Shaw, was killed in the crash. It is now undisputed that the cause of the crash was the failure of the plane's longi-

tudinal flight control system.[1] *Id.* at 2-4. Shaw's father sued Grumman, alleging that its design of the longitudinal flight control system was defective. Grumman defended in part by asserting the military contractor defense.

2. Factual Background

In 1957, petitioner was selected by the United States Navy, after competitive bidding, to produce the A-6 attack aircraft. Pet. App. 2-8. Testimony at trial indicated that the Naval weapons procurement process, presently and as in effect at that time, involves considerable interaction and negotiation between NAVPRO,[2] a unit of the Navy's Naval Air System Command, and the contractor concerning the ultimate design of a particular weapons system. Formal approval by the Navy of the contractor's proposed specifications is necessary at several stages, beginning after selection of the contractor[3] and continuing through the final production process.

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[1] The longitudinal flight control system is the means by which a pilot alters the position of the aircraft's horizontal stabilizer, thus allowing the pilot to steer the aircraft up and down. Pet. App. 1-2.

[2] NAVPRO is a division of the Naval Air System Command. The division contains between 100 and 200 persons with technical and engineering backgrounds. According to trial testimony, onsite NAVPRO personnel closely monitor the development of detailed specifications by the manufacturer for inclusion in the weapons' contract, and subsequently the quality of the aircraft actually produced by the manufacturer, insuring conformity with the appropriate drawings and specifications. Tr. II-166.

[3] The selection process begins with the issuance by the Navy of a Specific Operations Requirement, which describes generally the type of equipment that the Navy wishes to acquire. Interested manufacturers are required to submit proposals that describe the operational requirements in more detail, and that provide tentative cost information, production schedules, and the like. These proposals are evaluated by the Naval Air System Command, both for their technical quality and for cost aspects. On the basis of this evaluation, the contractor is selected to produce the aircraft. Tr. III-6.

Following selection of a contractor to build a weapons system, the Navy issues an initial general specification describing the type of weapons system sought. The contractor is then required to develop and propose detailed specifications for inclusion in the contract that flesh out the general specifications set forth by the Navy.[4] These detailed specifications, which are submitted to NAVPRO for review and formal approval, reflect informal agreements reached as a result of continuous consultation and negotiation between the contractor and NAVPRO (Tr. III-6). Upon approval, they are made line items in the contract and can not be changed without the approval of NAVPRO (Tr. III-12).

After the contract is completed, the contractor is required to develop and propose a further series of detailed design specifications to the Navy. These specifications include assembly and installation drawings and even "the detail drawings from which the company would manufacture the parts" (Tr. III-12 to 13). In addition, these specifications set forth plans for the various tests that the system is to undergo. Again, NAVPRO's formal approval of these specifications is mandatory before the contractor can proceed with manufacture of the system or any of its parts (Tr. III-17).

After NAVPRO approves the plans, the contractor is generally required to manufacture several prototypes in accordance with the plans. These prototypes are tested by both the contractor and Navy personnel (Tr. III-19), and, upon final approval, the contractor is authorized to proceed with production.

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[4] For example, the detailed specifications prepared by petitioner for inclusion in the A-6 contract included, among other things, information relating to engine type, cruise range, mission requirements, carrier suitability requirements, and other details associated with "the landing gear, flight control systems, hydraulic systems, electrical systems, * * * armament * * *, the location of equipment, cockpit, cockpit instrumentation, * * * [and] information about the structural integrity requirements, fatigue life" (Tr. III-7).

Following the deployment of the A-6, six accidents occurred that were thought to have been caused by a failure in the bolts that connected the various mechanical elements of the longitudinal flight control system. Pet. App. 1-2. Petitioner—prohibited by its contract from deviating from established design specifications—recommended to the Navy that this problem be treated by replacing the bolts in the flight control system with special "self-retaining bolts." *Ibid.* For fiscal reasons, the Navy delayed installing such bolts for several years, until 1978. *Ibid.* The first of two phases of bolt retrofitting had been completed on the flight control system of the A-6 aircraft that Lt. Shaw was piloting in this case.[5]

3. Proceedings Below

a. After a bench trial, the district court found petitioner negligent in the "design, manufacture, and testing" of the A-6's longitudinal flight control system (Pet. App. 2-15, para. 86), concluding that "[t]he ultimate defect * * * was its total lack of redundancy or compensating provisions." *Id.* at 2-9, para. 45. The court noted that "[r]edundancy is a basic element of design," and that "[g]eneral aviation aircraft and commercial transport aircraft all have redundancy in longitudinal flight control systems." *Id.* at 2-10, para. 53. It found that dual controls could have been installed to provide redundancy, although it noted that such a design would result in "a weight penalty and increased complexity" (*id.* at 2-11, para. 56), and further suggested that "[i]nstallation of a locking device to prevent random migration of the stabilator is within the realm of feasibility" (*id.* at 2-12, para. 70). The court added that

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[5] Testimony at trial indicated that, prior to Lt. Shaw's accident, there had been no known failure of an A-6 flight control system after the installation of any self-retaining bolts. Tr. III-24, 78-79.

"the A-6 * * * had no warning device to alert the crew" that the system had failed. *Id.* at 2-9, para. 47.[6]

Applying the elements of the military contractor defense as set out in *McKay* v. *Rockwell International Corp.*, 704 F.2d 444, 451 (9th Cir.), cert. denied, 464 U.S. 1043 (1983) (quoted at Pet. App. 1-14 to 1-15), the district court noted that " 'mere Navy approval of the detailed design specifications and drawings developed by Grumman does not make the government contractor defense available to it.' " Pet. App. 2-16, para. 93. It concluded that Grumman had failed to establish the elements of the military contractor defense set out in *McKay* for a number of reasons, including its failure to warn the Navy "about the dangers involved in the use of the [aircraft] that were known to [Grumman] but not to the [Navy]."[7] *Id.* at 2-16, para. 91. The court awarded the plaintiff $840,556.75. *Id.* at 2-18, para. 95.

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[6] The district court also found that petitioner was negligent in proposing to the Navy the solution to the disconnect problem later adopted by the Navy—the installation of self-retaining bolts—again, for failing to incorporate redundant, back-up systems into the flight control system. Pet. App. 2-10, para. 48.

[7] The court found that "Grumman was aware of the lack of redundancy" in the longitudinal flight control system and the lack of warning to the crew in the event of a failure of that system. Pet. App. 2-10, para. 50. It further found that the Navy examined and approved petitioner's specifications for the A-6 (*id.* at 2-8), and noted that petitioner had stated in a "failure effects analysis" performed at the Navy's direction before the A-6 was constructed that, since there was no backup longitudinal flight control system, any failure in the system " 'is potentially fatal' " (*id.* at 2-11, para. 77). The court concluded that "[w]hile the lack of redundancy may or should have been apparent to the Navy, it had neither the design staff nor the expertise to comprehend the catastrophic potential and probability of the disconnect problem. * * * The Navy was not aware of the defect in design at the time it approved the detailed specifications submitted by Grumman" (*id.* at 2-13, para. 77; 2-14, para. 80). And the court also found that "[o]nce aware of the defect due to the history of accidents with the aircraft, the Navy * * * justifiably rel[ied] on Grumman's advice that the problem with the longitudinal flight control system would be solved by installation of the self-retaining bolts." *Id.* at 2-13, para. 76.

b. The court of appeals affirmed. Declaring itself "not satisfied" (Pet. App. 1-16) with the elements of the military contractor defense that had been identified by other circuits,[8] the court "fashion[ed] a test with a somewhat different focus" (Pet. App. 1-18). The court held that the military contractor defense is available when either of two conditions obtain (Pet. App. 1-18 to 1-19 (emphasis in original)):

> A [military] contractor may escape liability only if it affirmatively proves:
>
> > (1) that it did not participate, or participated only minimally, in the design of those products or parts of products shown to be defective; *or* (2) that it timely warned the military of the risks of the design and notified it of alternative designs reasonably known by the contractor, *and* that the military, although forewarned, clearly authorized the contractor to proceed with the dangerous design.

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[8] The court specifically distinguished its approach from that taken by the Ninth Circuit in *McKay* v. *Rockwell International Corp.*, 704 F.2d 444, 451, cert. denied, 464 U.S. 1043 (1983) (as quoted at Pet. App. 1-14 to 1-15):

> [A] supplier of military equipment is not subject to section 402A [strict] liability for a design defect where: (1) the United States is immune from liability under *Feres* [v. *United States*, 340 U.S. 135 (1950)] and *Stencel* [*Aero Engineering Corp.* v. *United States*, 431 U.S. 666 (1977)], (2) the supplier proves that the United States established, or approved, reasonably precise specifications for the allegedly defective military equipment, (3) the equipment conformed to those specifications, and (4) the supplier warned the United States about patent errors in the government's specifications or about dangers involved in the use of the equipment that were known to the supplier but not to the United States.

It also stated that it was departing from two other versions of the military contractor defense, as enunciated in *In re "Agent Orange" Product Liability Litigation*, 534 F. Supp. 1046 (E.D.N.Y. 1982), cert. denied, 465 U.S. 1067 (1984), and *Koutsoubos* v. *Boeing Vertol*, 755 F.2d 352 (3d Cir. 1985).

It made clear that in determining the types of risks about which contractors must warn the military, the standards are to be drawn from the practices of the aircraft industry as a whole, including manufacturers of products for civilian use. *Id.* at 1-19 n.17. The court further emphasized that the military's approval of design specifications must be clearly responsive to that warning. *Id.* at 1-19 to 1-20.

The court of appeals focused on two allegations of design defects: (1) the failure to provide a redundant longitudinal control system; and (2) the failure to correct the disconnect problem with the proposal for self-retaining bolts. Pet. App. 1-20 to 1-21. Applying its test to petitioner, the court of appeals found that petitioner did not satisfy the first prong of its test because petitioner's participation in the design of the A-6 and in the proposal to install self-retaining bolts was not minimal. Pet. App. 1-21.

With regard to the failure to incorporate a redundant control system, the court of appeals held that "Grumman was both actually aware and reasonably should have been aware, given good design practice, of the risk of non-redundancy" (*id.* at 1-21). Although the court of appeals did not resolve the ambiguity of the district court's opinion concerning the Navy's awareness of the non-redundancy,[9] it adhered to the lower court's findings that the "Navy did not have sufficient expertise to render a warning of that risk unnecessary," and that petitioner had "failed to warn the Navy sufficiently of the danger inherent in the non-redundant longitudinal control system" (*id.* at 1-21 to 1-22).

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[9] Compare Pet. App. 2-13, para. 77 ("lack of redundancy may * * * have been made apparent to the Navy"), *id.* at 2-13, para. 76 ("[o]nce aware of the defect due to the history of accidents with the aircraft, the Navy * * *"), and *id.* at 2-16, para. 91 ("[o]nce aware of the design defects, the Navy * * *") with *id.* at 2-14, para. 80 ("[t]he Navy was not aware of the defect in design at the time it approved the detailed specifications submitted by Grumman").

With regard to the installation of the self-retaining bolts, the court of appeals noted that the district court found that "the Navy relied on Grumman's advice that these would solve the problem. This may be read as a finding of a failure to warn that the bolts would not correct the underlying defect" (Pet. App. 1-22).[10]

For these reasons, the court held that the Navy's formal approval of both the initial design of the A-6 and the design changes relating to the self-retaining bolts, "did not constitute the sort of informed military decision to accept the risk of a dangerous product to which this Court must defer under separation of powers doctrine" (Pet. App. 1-22).

DISCUSSION

The United States usually contracts to have its goods produced by the private sector. If the United States contracts for a product with express and mandatory specifications, the manufacturer cannot be held to account for executing that directive. *Yearsley* v. *W.A. Ross Construction Co.*, 309 U.S. 18 (1940). The manufacturer is an agent of the government, acting pursuant to its command. *Murray's Lessee* v. *Hoboken Land & Improvement Co.*, 18 How. (59 U.S.) 272, 283 (1854).

In the design and manufacture of military weapons, the relation between government and manufacturer is almost always more complex. The production of goods will involve design, performance, and production criteria,

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[10] It is worth noting that the district court's finding that the solution proposed by Grumman did not solve the problem seems not fully logical. The court found that: (1) Grumman proposed replacing all the bolts in the control system; (2) the Navy, after some years of delay, issued an order requiring the bolts to be replaced in two phases; (3) the A-6 at issue in this case had undergone only the first phase of bolt replacement, focusing on those bolts judged the most susceptible to failure. Pet. App. 2-8. Although this A-6 had not had all the bolts in its control system replaced with self-retaining bolts, the court concluded that "[t]he Shaw accident[s] demonstrates that the new bolts did not correct the defect in design" (*ibid.*).

some of which may be specified by the government in great detail, some in outline only, and some left to the unfettered discretion of the manufacturer. Moreover, even when these directives are mandatory, the manufacturer may have played a significant role in the development and formulation of the specifications. Indeed, as the court of appeals observed, "the more closely the contractor and the military work together, the more difficult it is to determine exactly who made design decisions" (Pet. App. 1-14).

A number of considerations have led courts to recognize, as a matter of federal common law,[11] a special defense available to the manufacturers of products essential to the military mission. A driving force behind this military contractor defense is the effect of litigation in calling into question military judgments concerning equipment safety and related matters. The courts have recognized that, at least under certain circumstances, "a trial between a serviceman and a military contractor in which government specifications are at issue would inevitably implicate the same concerns that underlie the Supreme Court's *Feres* [v. *United States*, 340 U.S. 135 (1950)] and *Stencel* [*Aero Engineering Corp.* v. *United*

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[11] In this case, because the action has been brought under the Death on the High Seas Act, 46 U.S.C. 761, "federal common law" amounts to no more than the court's construction of Congress's intent in passing that Act. However, in actions where claims are premised upon state tort law, federal common law is also appropriate to determine the extent of the military contractor defense. For, as the Court has noted in *Stencel Aero Engineering Corp.* v. *United States*, 431 U.S. 666 (1977), the relationship between the government and its suppliers of ordnance is certainly no less "distinctively federal in character" than the relationship between the government and its soldiers (431 U.S. at 672). Thus, a suit by a serviceman against one of the government's suppliers of ordnance gives rise to uniquely federal interests sufficient to warrant the imposition of federal law. *Bynum* v. *FMC Corp.*, 770 F.2d 556, 571 (5th Cir. 1985). See *Clearfield Trust Co.* v. *United States*, 318 U.S. 363, 366-367 (1943).

States, 431 U.S. 666 (1977)] decisions." *Tozer* v. *LTV Corp.*, 792 F.2d 403, 405-408 (4th Cir. 1986); *Bynum* v. *FMC Corp.*, 770 F.2d 556, 565 (5th Cir. 1985); *Tillett* v. *J. I. Case Co.*, 756 F.2d 591, 597 (7th Cir. 1985); *Koutsoubos* v. *Boeing Vertol*, 755 F.2d 352, 354-355 (3d Cir. 1985); *McKay*, 704 F.2d at 449.

The court of appeals here recognized the essence of these concerns in concluding that "military risk-taking—where it involves products supplied by contractors—is shielded from judicial scrutiny by the military contractor defense, provided only that it is knowing and purposeful." Pet. App. 1-13. In its precise formulation of the test, and the application of that test to the facts of this case, however, the court of appeals here has departed significantly from the approach taken by other courts. The net effect of these legal and factual departures is to restrict the military contractor defense to a very narrow class of cases, and to place upon it conditions precedent which will substantially disrupt the weapons procurement process. In view of the great attention which has been paid to the decision below by military contractors (see Brief of Amici Curiae), and the predictable ways in which it threatens to render less effective and efficient the existing processes for weapons design, development, and procurement, review by this Court is justified.

1. In *Feres* v. *United States*, 340 U.S. 135 (1950), the Court declined to construe the Federal Tort Claims Act as authorizing suits for injuries to members of the armed forces sustained in the course of duty. In reaffirming *Feres* recently, the Court noted that it seemed best explained by the " 'peculiar and special relationship of the soldier to his superiors, [and] the effects of the maintenance of such suits on discipline ***.' " *Chappell* v. *Wallace*, 462 U.S. 296, 299 (1983) (quoting with approval from *United States* v. *Muniz*, 374 U.S. 150, 162 (1963)).[12]

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[12] See, *e.g.*, *In re Grimley*, 137 U.S. 147, 153 (1890):

> An army is not a deliberative body. It is the executive arm. Its law is that of obedience. No question can be left open as

In *Stencel Aero Engineering Corp.* v. *United States*, 431 U.S. 666 (1977), the Court declined to construe the Federal Torts Claims Act as authorizing indemnification suits brought against the United States by contractors that have been sued by servicemen, on the ground that such suits would have the same adverse consequences as direct suits, even though the serviceman was not nominally a party-plaintiff (431 U.S. at 673):

> [W]here the case concerns an injury sustained by a soldier while on duty, the effect of the action upon military discipline is identical whether the suit is brought by the soldier directly or by a third party. The litigation would take virtually the identical form in either case, and at issue would be the degree of fault, if any, on the part of the Government's agents and the effect upon the serviceman's safety. The trial would, in either case, involve second-guessing military orders, and would often require members of the Armed Services to testify in court as to each other's decisions and actions.

In formulating the military contractor defense, courts have likewise recognized that the substitution of one party—even where a private party is susbstituted for the United States—does little to eliminate the deleterious consequences of the litigation for military discipline:

> Litigation involving defective design in military products would take the identical form regardless of whether the named defendant happens to be the government or the military contractor. In either case, members of the armed services would be allowed to question military decisions and obtain relief from actions of military officials.

Bynum v. *FMC Corp.*, 770 F.2d at 565. This follows from the fact that "[m]ilitary contractors ordinarily

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to the right of command in the officer, or the duty of obedience in the soldier.

See also *Parker* v. *Levy*, 417 U.S. 733, 758 (1974); *Greer* v. *Spock*, 424 U.S. 828, 843-44 (1976) (Powell, J., concurring).

work so closely with the military * * * that it is nearly impossible to contend that the contractor defectively designed a piece of equipment without actively criticizing a military decision." *Tozer* v. *LTV*, 792 F.2d at 406. The design alternatives explored in the context of military contracting necessarily depend upon uniquely military considerations which may require foregoing a margin of safety in order to satisfy other mission criteria. As the Fifth Circuit noted in *Bynum*, 770 F.2d at 569:

> Often dangerous designs [of military weapons] must be used in the military context to meet the exigencies of our national defense, and even military equipment that is relatively safe for every day use may have to be operated on occasion under dangerous conditions or in a manner creating a high risk of harm.

Similarly, it is necessary, given the nature of the military mission, "to push technology towards its limits and thereby to incur risks beyond those that would be acceptable for ordinary consumer goods." *McKay*, 704 F.2d at 449-450.

Application of the court of appeals' decision in cases such as the present one will require judges, juries, and lawyers publicly to explore the nuances of specific contracting decisions in a way highly disruptive of the procurement process. The military contractor defense recognizes that this is not their proper function. "The complex, subtle, and professional decisions as to the composition, training, equipping and control of a military force are essentially professional military judgments, subject *always* to civilian control of the Legislative and Executive Branches." *Gilligan* v. *Morgan*, 413 U.S. 1, 10 (1973) (emphasis in original).

While a number of other policy justifications have been offered to buttress the military contractor defense,[13]

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[13] For example, a failure to adopt a military contractor defense would indirectly raise the cost of military weaponry: "military

we believe that its limits are properly defined by the *Feres-Stencel* concern to avoid judicial scrutiny of military decisionmaking, with the second-guessing and impairment of discipline that that entails.[14] We believe that the test enunciated by the Ninth Circuit in *McKay* (see n.8, *supra*), implements this limited objective in a balanced and effective manner. It requires, in addition to the immunity of the United States under *Feres* and *Stencel*, that the equipment conform to reasonably precise specifications which were established or approved by the United States, and that the contractor warned the United States about errors or dangers inherent in the product as specified which are known to the supplier but not to the United States. *McKay*, 704 F.2d at 451.

It is therefore clear and, we submit, appropriate, that the military contractor defense will apply only where the military has either established or approved the specifications that are alleged to have caused a serviceman's injury—so that military judgments are truly implicated. It is also a necessary condition of the defense that the military contractor warn the military about dangers

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suppliers, despite the government's immunity, would pass the cost of accidents off to the United States through cost overrun provisions in equipment contracts, through reflecting the price of liability insurance in the contracts, or through higher prices in later equipment sales." *McKay*, 704 F.2d at 449. The courts have also observed that, as in *Feres* and *Stencel*, recognition of the military contractor defense does not leave servicemen without a remedy for their injuries. "The Veterans' Benefits Act 'provides a swift, efficient remedy for the injured serviceman.'" *Tozer* v. *LTV*, 792 F.2d at 407 (quoting *Stencel Aero Engineering Corp.*, 431 U.S. at 673).

[14] This is not to suggest that the constitutionally-based government-agent defense, articulated in *Yearsley*, is or can be so limited. If the Executive or Legislative Branches give express and constitutionally authorized directions to their agents, "whatever the immunities of the sovereign, the agent thereafter cannot be pursued." *The Paquete Habana*, 189 U.S. 453, 465 (1903) (Holmes, J.).

known to it as a result of performance of its contractual duties, but not known to the military. While the military is a sophisticated and competent participant in the process of design and manufacture, it is not always aware of all the risks that may be known to the contractor. The relationship between the military and its contractors is improved on the whole by a requirement that ensures that the information flowing from contractors to the military is as full and frank as is reasonably possible and that all risks and dangers known to contractors have been disclosed.

The court of appeals here went beyond these requirements in a manner narrowing the applicability of the defense to a degree which will prevent achievement of its primary objectives. For under *Shaw*, except in the rare instance where the contractor plays essentially no part in the design of the product,[15] a military weapons contractor can be shielded from liability for design defects only if: (1) the contractor has warned the military not only of design risks and alternatives reasonably known as a result of full performance of the contract terms, but of those that should reasonably be known to the contractor under the standards of the industry, defined to include civilian as well as military producers of similar items; and (2) the military responds to this required warning with a "knowing approv[al]" that is

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[15] This first prong of the *Shaw* test will rarely if ever be a relevant factor in the military procurement process. The procurement of high-performance weapons' systems at the cutting edge of technology that are intended for highly sophisticated military missions demands that industry and government work together closely in the design, testing, and manufacture of the desired weapon: "The contractor and the military pool their expertise, matching the latest advances in military technology with the specific dictates of the mission." *Tozer* v. *LTV*, 792 F.2d at 407. Design criteria can only be specified with the absoluteness required by the first prong of the *Shaw* test in areas where technology is established and the capacities of manufacturers are settled and known.

"obviously related and responsive to the relevant warning." Pet. App. 1-8 to 1-20.

2. Adopting this standard of imputed knowledge substantially expands the responsibilities as well as the potential liability of a contractor. For under the *Shaw* test, a contractor's performance is measured by the design practices of manufacturers that produce similar or related products, whether for civilian or military consumption. In this case, the standard of design practice was derived from those of "the aircraft design industry * * * civilian or military" (Pet. App. 1-19 n.17).

Results under the *Shaw* test will diverge sharply from those resulting where the contractor is held to a standard of full contractual performance. For example, when a manufacturer of military aircraft has not engaged in the kind of testing or analysis that is normally engaged in by other portions of the aircraft industry and does not discover a latent defect that it would have thus discovered, it cannot avail itself of the military contractor defense under *Shaw* for suits concerning this defect.[16] Similarly, if a manufacturer of military aircraft has not advised the military of alternative designs that are typically employed in aircraft produced for civilian air transport, and that would render the aircraft safer, it may not, under *Shaw*, be able to invoke the military contractor defense if an accident results on account of the less safe feature.

The court of appeals' reference to the practices followed by manufacturers of other products ignores both

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[16] Apparently, the fact that the testing requirements for a particular weapon are specified in the procurement contract will not, under *Shaw*, affect this result. For testing specifications, like any other design specification, are arrived at after give and take between the contractor and the military. And the *Shaw* court emphasized that "[i]n fashioning a standard by which courts may measure responsibility for design judgments, we consciously avoid too sanguine a view of the usefulness of product 'specifications'" (Pet. App. 1-17).

the unique needs that underlie each weapons system and the nature of the military procurement process. Most weapons systems are devised with a specific tactical or strategic mission in mind, and time is often of the essence. Not only the precise specifications, but the time schedule of production and the type and number of tests conducted are bargained-for aspects of the contractual relationship. It is therefore not reasonable to judge a military contractor by standards applicable to contractors of commercially-marketed products. Rather, if a contractor supplies a product that conforms to detailed specifications approved by the military, the proper concern of a court must be directed toward whether the contractor has performed the testing and analysis required by its particular contract and given warning appropriate in light of the contract.

Application of the *Shaw* test will, therefore, provide military contractors with a strong incentive to engage in testing and safety evaluation beyond that required under the military contract. This will involve reevaluation by the contractors of the design specifications furnished (or approved) by the government, *Bynum* v. *FMC Corp.*, 770 F.2d at 576, which will, in turn, necessarily involve both delay and increased cost to the government. In significant respects, therefore, it amounts to judicial intrusion upon "decisions that are better left to the military and the political branches of government." *Ibid.*

That intrusion is well illustrated by comparing the reasoning of the court of appeals in *Shaw* with the recent decision of the Fourth Circuit in *Tozer* v. *LTV*, 792 F.2d 403 (1986), which applied the *McKay* version of the military contractor defense. In *Tozer*, the contractor had designed a hood for an aircraft engine; the hood was fastened with "camlocs." *Tozer*, 792 F.2d at 405. The plaintiffs contended that "usually many camlocs are installed for safety [and that the contractor] was negligent because it did not fasten the panel with redundant camlocs." *Ibid.* The court simply concluded that the mili-

tary had approved the design and the contractor did not fail to notify the military of dangers actually known to it and unknown to the military. 792 F.2d at 408. The *Tozer* court emphasized the dangers of importing civilian notions of safety and defect into military settings (792 F.2d at 406):

> While jurors may possess familiarity and experience with consumer products, it would be the rare juror —or judge—who has been in the cockpit of a Navy [aircraft] off the deck of a carrier on a low level, high speed fly-by maneuver. * * * What would pose an unreasonable risk to the safety of civilians might be acceptable—or indeed necessary—in light of the military mission of the aircraft. * * * Difficult choices, tradeoffs, and compromises inhere in military planning that simply find no analogue in civilian life.

The Fourth Circuit's rationale in *Tozer* reflects the obvious proposition that the mission of a carrier capable attack aircraft is far different from that of a civilian airliner. These different mission requirements lead to decisions regarding the design and construction of each that make intelligent comparison impossible. Such an approach stands in stark contrast to the reasoning of the court here, which judged the defectiveness of the original design by reference to general design practice and without regard to the serious "weight and complexity" consequences that would have resulted from redundancy.[17]

In summary, the imputing of knowledge based on a standard of care developed in contexts apart from military contracting has serious adverse effects on military procurement. It produces perverse incentives, inclining contractors to recommend or perform safety tests with

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[17] The court of appeals in *Shaw* further relied on petitioner's "failure to warn that the [retrofit] bolts would not correct the underlying defect," a fact of which it apparently should have been aware in light of the general defectiveness of the system as a whole. (Pet. App. 1-22.)

an eye to their own potential liability rather than military necessities. Contractors, feeling compelled to perform tests not required under the contract, might well increase their bids or, faced with such uncertainty, "be discouraged from bidding on essential military projects." *Bynum* v. *FMC Corp.*, 770 F.2d at 566.

In addition, contractors that do seek out (or are compelled to perform [18]) military weapons' contracts are given a natural incentive to avoid as much as possible all participation in the establishment of design criteria. For only by its lack of participation in creating the design criteria can the contractor satisfy the first prong of the *Shaw* test and avoid the great uncertainties imposed by the broadly formulated duty to warn. This may well be significantly disruptive of the cooperative joint enterprise by which most military weaponry is presently designed and produced.

Also, contractors will have an interest in establishing an elaborate and voluminous paper record, to document its warnings on every particular in which a military aircraft departs from the design of its civilian counterparts. If, to take this case as an example, it is necessary for contractors to warn the military about matters as inherently self-evident as the safety margin provided by a redundant flight control system, there are few military departures from civilian norms which do not so require. Such a voluminous record may reasonably be expected to obscure those matters upon which serious discussion between a contractor and the military ought to focus, to the detriment of the true safety of our nation's servicemen.

3. In addition to the requirements of warnings in a broad and uncertain range of situations not required

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[18] The Defense Production Act, 50 U.S.C. App. 2071(a) gives the Executive Branch authority to require a private contractor to accept military contracts.

under the *McKay* test, the *Shaw* test imposes as an additional condition precedent to the defense a requirement that the military approve the subject design in a manner "obviously related and responsive to the relevant warning"—no "blanket" approval will do.[19] Indeed, it goes yet a step further and allows consideration of evidence of the "military's own level of relevant knowledge and expertise," presumably as bearing on the informed and deliberate character of its concurrence in the design (Pet. App. 1-20).

Thus here, as with its definition of the warning requirement, the Eleventh Circuit has virtually ensured the creation of a new, mountainous paper record in connection with every procurement contract, and has made a practical and substantial alteration in the procurement process. In response to the contractor's incantation that one or the other particular system in an attack aircraft is not as safe as it would be if a redundant system were incorporated in the design, it appears that the military must similarly respond in words evidencing not only its desire to proceed nonetheless, but also its specific understanding of the defect being "waived" and its own expertise to make that judgment. Unless the military alters its procurement process in this way, under the *Shaw* rule contractors who perform the military's bidding will be accountable in tort.

This kind of case-by-case evaluation of the competence with which a particular military decision was made is a substantial intrusion upon military prerogatives as well as a potential burden to the weapons' procurement process. It is inappropriate for the courts to set themselves the task of determining how much attention must be given to safety risks by the military—or from whom the military must receive opinions—before a command deci-

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[19] "For the defense to obtain, the contractor must actually inform the military of the consequences of the latter's [*sic*] decision." Pet. App. 1-20 n.18.

sion to acquire a product in a given form is respected. Cf. *United States* v. *Shearer*, No. 84-194 (June 27, 1985), slip op. 6 (improper to require commanding officers "to stand prepared to convince a civilian court of the wisdom of a wide range of military * * * decisions.") The military—despite the court of appeals' disparagement of its expertise and competence—is a sophisticated participant in the design process, and "[w]hen to require additional testing of military equipment, and at what cost, are decisions that are better left to the military and the political branches of [the] government." *Bynum* v. *FMC Corp.*, 770 F.2d at 576.

Moreover, this requirement poses a serious potential threat to military discipline. In order to establish his right to relief, a serviceman-plaintiff will have an incentive to demonstrate that a military superior's judgment in a given circumstance was "unknowing." He will seek to establish that his military superiors lacked the competence to make the judgment they made and that, therefore, more disclosure on the part of the contractor was required than was given. Such a burden of proof will necessarily impact adversely on military discipline.

The court of appeals' elaboration of this knowing waiver requirement contracts sharply with the approach taken by other courts. In *Dowd* v. *Textron*, 792 F.2d 409 (1986), for example, the Fourth Circuit applied the *McKay* test in similar circumstances and concluded that the warning by a contractor of known defects was sufficient. No inquiry into why the military did or did not do what was recommended by the military contractor in that case was permitted or regarded as relevant: "What ever the reasons [for the Army's action or inaction], it is not up to the jury to second-guess this military judgment." *Ibid.* Only by reaching such a conclusion do courts appropriately avoid interference with military decisions about both the general nature of its procurement process and the specifications of particular weapons systems.

CONCLUSION

The petition for a writ of certiorari should be granted.

Respectfully submitted.

CHARLES FRIED
Solicitor General

RICHARD K. WILLARD
Assistant Attorney General

DONALD B. AYER
Deputy Solicitor General

JAMES M. SPEARS
ROBERT L. WILLMORE
Deputy Assistant Attorney General

CHRISTOPHER J. WRIGHT
Assistant to the Solicitor General

ROBERT S. GREENSPAN
Attorney

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